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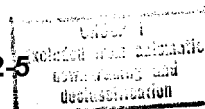
CIA/OSR GB 64-6  
February 1964

IMPLICATIONS OF SOVIET WORLDWIDE COLLECTION  
OF TERRESTRIAL DATA

1. The USSR has been engaged, especially since 1954, in vigorously collecting terrestrial data on the earth as a whole, chiefly through international scientific activities and foreign aid programs in underdeveloped countries. While the Soviets propagandize their research and aid activities in lofty terms of "peace," "friendship," and for the "good of mankind," they are in fact perpetrating a deception designed to strengthen their military power. They freely obtain terrestrial data and large-scale maps of the Free World, which they utilize for their own strategic ends, and yet absolutely refuse to release comparable data and maps of the Soviet Bloc to the Free World. Underdeveloped countries unknowingly surrender valuable basic data that can be used against them in future subversive insurgency operations against their own countries.

2. Soviet interest in surveying and mapping and geological-geophysical exploration began with programs decreed by Lenin as early as 1919. The original objective was to survey and map the entire USSR as a prerequisite for systematic mineral exploration, needed for industrial development, and for military operations. By 1954, the USSR completed its topographic mapping at 1:100,000; and huge investments in geological and geophysical programs over the years have provided the vast natural resources required for the industrialization of the USSR.

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(Memorandum of 20 May 64 to Recipients)  
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3. Since 1954, the USSR has expanded its activity in the collection of physical environmental data for the entire earth. Soviet topographic and geological-geophysical surveying and exploration activities in foreign areas, through international scientific research and foreign aid programs, provide basic data to the Soviet worldwide study of the earth as a whole from its core to outer space. Soviet doctrine holds that superiority in the collection and analysis of scientific data leads to superiority in the forecasting of otherwise unpredictable natural phenomena and, in turn, to military and economic superiority. Major General G. I. Pokrovskiy states that acquisition of scientific knowledge is competitive and is, therefore, an integral part of the power struggle. On the other hand, the Free World conducts basic research as an end in itself, and the results become a part of worldwide knowledge. Soviet doctrine thus explains the refusal of the USSR to release basic terrestrial data in geodesy, gravimetry, seismology, geomagnetism, and large-scale geological data covering the Soviet Bloc area. The strategic importance of these terrestrial data and also of topographic maps (at 1:1,000,000 and larger scales) to the USSR is underscored by its rigid denial of such data and maps to all countries outside the USSR, even the other Bloc countries. For example, the Soviets refuse to release 1:1,000,000 map coverage of the USSR to members of UNESCO or anyone else despite Soviet membership in UNESCO, under which the production of the International Map of the World (IMW), 1:1,000,000, is now being coordinated. Yet as a UNESCO member the USSR has free access to all IMW maps that are produced by other member countries. The United States offers its large-scale topographic and geologic maps on open sale to anyone in the world.

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4. Aggressive Soviet participation in international scientific programs began with the 1954 Soviet preparations for the program of the International Geophysical Year (IGY), 1957-58, and now has expanded into a broad range of activities sponsored by the International Union of Geodesy and Geophysics (IUGG), the International Committee of Geophysics, the several special Scientific Committees (on Oceanic Research, on Space, and on Antarctica), under the International Council of Scientific Unions (ICSU), and in the ICSU's Federation of Astronomical and Geophysical Services (FAGS). Soviet foreign aid, through direct programs and through UNESCO activities, has provided an effective means of stimulating survey programs and of collecting basic environmental data on foreign areas otherwise not accessible to the USSR. Since 1954, the USSR and the other Bloc countries have undertaken various types of survey programs, or construction projects requiring surveys, in more than a dozen underdeveloped countries. That the USSR has access to terrestrial data obtained by other Bloc countries has been demonstrated by the fact that members of the European Bloc were forced to transform their topographic mapping systems to conform to the Soviet system. Here again, the flow of geodetic data was one-sided -- from the Bloc countries to the USSR.

5. It is doubtful whether any of the underdeveloped countries benefiting from Soviet Bloc survey and exploration projects are aware of (1) the contribution such projects make to Soviet ICBM targeting capabilities, and (2) the loss to their own security through a buildup of Soviet insurgency capabilities. All geological, hydrogeological, topographic, and geophysical (gravity, seismological, and magnetic) data obtained through Bloc aid,

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including programs financed by UNESCO, are exploited by the USSR in the development of its own geodetic program. The objective of this worldwide program that relates directly to the ICBM is to develop (1) greater geodetic accuracies between widely separated points through improved knowledge of the size and shape of the earth, and (2) a worldwide coordinate system for target purposes, especially in heretofore unmapped areas. Any type of resource exploration (geological, geophysical) or area development project -- transportation, water development -- is usually preceded by a topographic survey to develop a network of geodetic control points. These points can be tied into the Soviet geodetic coordinate system, which also increases significantly the targeting accuracy for the Soviets in the surveyed area. Geophysical projects usually include gravity determinations which are essential to the Soviet program of determining the external gravity field of the earth. Also, through recent advances in methodology, data on the gravity field can be extrapolated from geological, seismological, and magnetic data. Knowledge of the gravity field is not only necessary for the study of the size and shape of the earth but is useful in converting astronomical points into geodetic positions through the correction of deflection errors.

Underdeveloped countries undoubtedly are unaware that their own security is jeopardized by the Soviet Bloc acquisition of basic terrestrial data through Soviet technical assistance programs and through Soviet participation in UNESCO activities. Such detailed data can be utilized in the production of large-scale maps and detailed studies that are invaluable in the planning and conduct of insurgency operations. When topographic, geologic, and hydrologic data and information on vegetation are assembled and compiled by the extensive

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and capable Soviet research and mapping organizations, the resultant compilation provides unique military geographic information (terrain characteristics, ground conditions relative to movement and concealment, water supply, gridded maps for artillery fire-control, etc.) that cannot be duplicated by the underdeveloped countries themselves. When such information is made available by the USSR to insurgent movements of its choice, the underdeveloped countries are subjected to a tremendous military planning and tactical disadvantage in countering any action supported by the USSR. Once the Soviet Bloc obtains such basic information, the underdeveloped countries cannot control the subsequent development of it for insurgency applications.

6. The underdeveloped countries can play a significant role in counter-ing some of the Soviet benefits now being obtained. Each country receiving Soviet aid can help to make a major contribution to world science and world peace by insisting as a condition of an aid agreement that the USSR must provide identical data on its own area to the UN or to appropriate ICNU organizations -- point for point, map for map, and scale for scale. In so doing, it will negate the strategic advantage gained by the Soviet denial of basic scientific data covering the USSR, more than one-seventh of the land surface of the earth.

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